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# Empire, Environment and Religion: God and the Natural World in Nineteenth-Century New Zealand

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## ABSTRACT

This article, using colonial New Zealand as a case-study, and integrating environment, empire and religion into a single analytic framework, contends that Christian and environmental discourses interpenetrated and interacted in irreducibly complex ways during the long nineteenth century. Many of the colony's mostly Protestant settlers interpreted the book of Genesis as giving them responsibility to 'subdue and replenish' the natural world; dominion theology played an important role in legitimising the improvement projects integral to settler capitalism whose consequences have aroused ambivalence from many modern scholars. Yet some, perhaps many, colonists also believed that they had a duty to take care of the land and its creatures even while transforming it. A commitment to large-scale environmental change could and often did co-exist with interest in and respect for nature. When the unexpected and unwanted consequences of environmental transformation became apparent, as they did shortly after the beginning of organised settlement, concerned Protestant community leaders deployed Christian discourse, biblical images and Protestant ethics along with utilitarian and scientific arguments to mobilise environmental concern and a conservationist conscience.

## KEYWORDS

Empire, environment, Christianity, theologies of nature, improvement, conservation

Awe and fear gripped Joel Samuel Polack (1807–82), a Jewish trader, as he and his Maori guide Tāmāroa neared the ‘black craggy rocks’ and ‘frowning majesty’ of Manganui, a high bluff on the east coast of the North Island of New Zealand during the mid-1830s. With the bluff battered by the sea and spray shooting ‘near 300 feet’ into the air, Polack recorded how, ‘entranced in this spot of solitary horror’, he ‘most fervently prayed to the great and merciful Father, Creator of the universe and its various inhabitants’. The ‘utmost power and skill’ of mere humans seemed to Polack ‘as nothing’ when compared ‘with the stupendous works around me, that had never before been so nearly approached by civilised man’.<sup>1</sup>

Polack’s spiritual response to the power and majesty of nature in what in 1840 became the southernmost colony of the British Empire raises questions. What connections can the historian discern between religion, empire and environmental awareness and concern during the long nineteenth century? Did the Judaeo-Christian traditions to which most British colonists adhered shape and inform their environmental attitudes and behaviour in significant ways? Or did religion cease to matter as science and secularisation pushed it to the margins of Western cultures during the second half of the century?

This article, a case study of colonial New Zealand, integrates environment, empire and religion into a single analytic framework. Incorporating insights from recent scholarship on gender, imperialism and the history of science, we hope to provoke renewed debate about the environmental meanings of religion in colonial cultures during the long nineteenth century. Focusing on the years between 1814, when the first Protestant missionaries arrived, until 1921, when Herbert Guthrie-Smith published *Tutira: The Story of a New Zealand Sheep Station*, we argue, firstly, that the settlers’ environmental attitudes and practices cannot adequately be understood apart from the religious traditions they brought with them. Taking issue with historians who depict nineteenth century New Zealand as exceptionally secular, we argue that throughout the nineteenth century many settlers drew on biblical ideas and images as well as scientific and utilitarian considerations in relating to the natural world. More specifically, many used ‘dominion theology’ – the idea, derived from the book of Genesis, that God gave humans dominion over the earth and its creatures – to legitimise ‘improving’ the land. They burnt bush, felled forests, drained swamps and introduced exotic plants and animals in their quest to create a bountiful, productive and prosperous country in which ordinary people, subordinated in the Old World, could flourish. The improvement projects they launched had massive, often unexpected and sometimes disastrous consequences for the landscape and its existing inhabitants, as previous historians have shown. Christian discourse was inextricably intertwined with environmental transformations on which many modern scholars have looked critically.

Yet colonial Christianity never had a single, simple, or monolithic environmental meaning. This is our second major claim. Taking issue with scholars who

depict colonial Christians as predominantly indifferent or hostile to nature, we argue that Christian and environmental discourses interpenetrated in irreducibly diverse, complex and contingent ways. From the beginning, many settlers saw nature in New Zealand as God's creation, and found in it scientific interest, aesthetic beauty and spiritual delight. Virtually as soon as resource depletion, erosion, deforestation and other problems became apparent, some wrestled – with each other and with their consciences – over the environmental consequences of colonisation. While many invoked biblical images and ideas to legitimise the improvement projects integral to settler capitalism, others – often the same individuals who supported progress – invoked biblical images, Christian ethics and scientific arguments to criticise environmental degradation and mobilise a conservationist conscience. Participants on all sides of these debates invoked God, the Bible and Christian tradition as well as practical and scientific arguments in order to mobilise public opinion and strengthen their cause. A brief conclusion explains why we consider it important to write fairly, accurately and without condescension about the complex role that Christianity played in the shaping of the environmental culture of Britain's southernmost colony.

This article's limits must be acknowledged before we begin. We focus here mainly on the incoming settler population, discussing Maori environmental culture only briefly, mainly because it deserves fuller treatment than we can offer here. For similar reasons, we say little about the conflicts over land that erupted between colonisers and colonised, whose consequences still trouble the nation. Suffice it to say that this article's main thesis applies also to these land debates. Attitudes to land cannot be understood, especially on the Maori side, in purely secular terms. Few if any nineteenth century Maori saw land simply as a commodity, bereft of larger social, cultural and spiritual meanings.<sup>2</sup> Similarly, Pakeha attitudes toward Maori land cannot adequately be understood without taking religion into account. The chief and most consistent British defenders of Maori land rights between the 1830s and 1860s were middle class Anglican humanitarian officials and missionaries. Their racial politics, which infuriated many settlers, cannot be understood apart from their religious and moral concerns.<sup>3</sup> We focus in what follows mainly on the British and Irish Protestants (if Anglicans are included in this category) who comprised over 80 per cent of the settler population. The environmental attitudes of religious minorities such as Roman Catholics, Mormons, Chinese Confucians and freethinkers require further investigation.

## HISTORIOGRAPHY.

We begin this case study by placing colonial New Zealand in the context of long-standing debates about religion and the modern ecological crisis. Few environmental historians have paid much attention to traditional Christianity,

especially after about 1850, thanks partly to the enduring influence of the views of the American historian Lynn White Jr. Writing in the turbulent late 1960s, he held Western Christianity largely to blame for the ecological crisis. Whereas pagan peoples considered humanity to be part of nature, White argued, European Christians read the Genesis account of creation to mean that God had given humans dominion over nature and, thus, divine sanction to do what they liked with the non-human world. According to White, Christian anthropocentrism, combined with the rising technological and scientific power of Europe, led to massive environmental degradation. Western Christianity, 'the most anthropocentric of all religions', bore 'a huge burden of guilt' for the modern ecological crisis.<sup>4</sup>

A liberal Presbyterian, White intended to expose the environmental sins of the West in order to provoke repentance and reformation.<sup>5</sup> His article soon 'became almost a sacred text for modern ecologists'.<sup>6</sup> Subsequent scholars often reinforced its general thrust while modifying the argument in certain respects. According to John Passmore, writing in 1974, early modern Europeans blended Christian theology, Stoic philosophy, scientific knowledge and technological power to sanction amoral exploitation of the natural world.<sup>7</sup> In 1977, environmental historian Donald Worster argued that Christianity 'stripped from nature all spiritual qualities and rigidly distanced itself from human feelings', promoting 'a view of creation as a mechanical contrivance'.<sup>8</sup> Historians Stephen Fox and Roderick Nash, writing in the 1980s, contended that Western Christianity had so devastated the planet that environmentalists must abandon it.<sup>9</sup> Clive Ponting's *Green History of the World*, appearing in 1993, depicted Western Christianity as considerably more ecologically destructive than non-Western religions. Even as Europe secularised during the nineteenth century, said Ponting, it retained the disastrous anthropocentrism of its Christian past.<sup>10</sup> More recently, historian Don Garden claimed that in Australasia and the Pacific 'Christianity was the most environmentally harmful of the major religions'.<sup>11</sup>

This White-Ponting interpretive tradition, as we will call it, held Christianity substantially responsible for the ecological sins of the West. Tracts for the times as well as histories of them, such writings resembled in style and tone the jeremiads with which Puritan clergy had lashed consciences in seventeenth century New England. The more extreme writers, identifying Christianity as the environmental AntiChrist, exemplify the apocalyptic strain that John MacKenzie has identified as an enduring stream in modern environmental historiography.<sup>12</sup>

White's arguments did not go unchallenged however. In 1983, Robin Attfield argued that medieval and early modern Christians showed far more interest, care and concern for nature than White, Passmore and others had acknowledged.<sup>13</sup> In *Man and the Natural World* (1983), historian Keith Thomas argued that adherents of non-Christian religions exploited nature as carelessly as European Christians. According to Thomas, White blamed Christianity too much, and capitalism too little, for environmental degradation. Moreover, said Thomas, Judeo-Christian tradition, 'deeply ambivalent' about the natural world, empha-

sised 'a distinctive doctrine of human stewardship and responsibility to care for God's creatures' alongside the countervailing 'emphasis on man's right to exploit the inferior species'.<sup>14</sup> More recently, Peter Harrison found 'little in the history of the interpretation of Genesis to support White's major contentions' during Christianity's first fifteen centuries. Only in the seventeenth century, with the rise of literal interpretations of Scripture favoured by Protestants, did European Christians read Genesis as legitimising human dominion over the physical world and its creatures. Even then, however, most natural philosophers and theologians interpreted dominion to mean neither 'human tyranny over a hapless earth' nor 'arrogant indifference to the natural world' but rather the restoration of nature to Creation's original perfection. Christian impulses of dominion and stewardship, often depicted by previous scholars (including Thomas) as polar opposites, were generally 'directed toward a common goal' – the restoration of the peace and harmony between God, humanity and nature that characterised the Garden of Eden before the Fall.<sup>15</sup>

This article extends this scholarly debate over the environmental meanings of Western religion into the context of an expanding British empire. We introduce insights about empire, modernity and religion gleaned from recent work in imperial history, which for much of the twentieth century showed little interest in connecting these fields. During the 1980s and '90s, however, as Hinduism, Islam, Buddhism, Judaism and Christianity roared back into public prominence, scholars began to question long-held assumptions that modernity inexorably eradicated religion. In *Nature's Government*, for example, Richard Drayton argued that 'Christian assumptions about man's place in nature played a central role in the making of Imperial Britain well into the nineteenth century'. Agriculture 'as a way of using nature sanctified by the religious and economic assumptions of the West' proved 'crucial to the culture of British expansion'.<sup>16</sup> In *The Birth of the Modern World* (2004), C.A. Bayly contended that the 'great [world] religions', far from dying out, 'staged a remarkable resurgence after 1815', transforming 'themselves and the societies within which they worked'.<sup>17</sup>

Yet environmental historians – with the exceptions of Drayton, John Mackenzie, Richard Grove and Sujit Suvusunduram – have paid only passing attention to religion in imperial and colonial contexts.<sup>18</sup> And even Drayton, Grove and Sivasundaram said little about the second half of the nineteenth century, conventionally depicted as a period of rapid secularisation. Those North American environmental historians that have written about religion, perhaps reflecting this assumption, have focused mainly on lapsed or lapsing Protestants such as Henry Thoreau, a Transcendentalist, and John Muir, a pantheist. The environmental attitudes of the millions of North Americans who remained mainstream Christians have received much less attention.<sup>19</sup>

## NEW ZEALAND

Nineteenth century New Zealand constitutes a fascinating historical laboratory in which to explore the interconnections between empire, environment and religion. As recent scholarship has shown, colonisation transformed the landscape more rapidly and dramatically than in any other white settler colony in the world. English, Scottish and Irish settlers, sailing in after the Treaty of Waitangi was signed in 1840, toppled trees, pounded fern, cleared bush and introduced dozens of exotic plant and animal species. By the early twentieth century, they turned New Zealand into a giant farm, sending wool, meat and dairy products to overseas, mostly British, buyers.<sup>20</sup> The chief casualties, as elsewhere, were the existing landscape and its inhabitants.

The colonists left behind a treasure trove of sources recording changes in the land. In addition to books, scientific articles, newspapers and government publications, we include sources less often used by environmental historians such as missionary journals, church magazines, sermons, Sunday School lessons, paintings, poems and church leases. By casting our net widely, we hope to recover forgotten voices, especially those of women and children, thus building up a full, socially inclusive picture of the environmental culture of Britain's southernmost colony. We conclude by exploring the religious dimensions of Herbert Guthrie-Smith's *Tutira* (1921), a book that environmental historian William Cronon has called one of the 'most richly textured ecological observations and meditations on nature available anywhere in the English language'.<sup>21</sup>

New Zealand offers a tough test for our claim that Judeo-Christian traditions significantly shaped environmental cultures in the British world. According to many historians, it was from the beginning of settlement the most secular, post-Christian society in the English-speaking world. In *A History of New Zealand*, for example, Keith Sinclair, the country's most prolific and influential modern historian, declared a 'simple materialism' the 'prevailing religion', and doubted whether the population had been 'in any sense more religious' during the nineteenth century.<sup>22</sup> Historian of religion Hugh Jackson took for granted 'the marginal role of organised religion in the new land'.<sup>23</sup> New Zealand 'came to birth during the emergence of the Secular Age', agreed the country's most prominent Protestant theologian.<sup>24</sup>

Brief references to religion in the work of scholars writing about the New Zealand environment suggest that most either embraced this 'secular New Zealand' thesis, and ignored religion as irrelevant, or else accepted the White-Ponting 'Bad Christianity' thesis.<sup>25</sup> Exemplifying the first tendency, historical geographer Alan H. Grey claimed that the British colonised New Zealand at 'the start of the secular age', building an acquisitive, materialistic society in which the 'promise of profit provided sufficient moral warrant in an atmosphere where human self-interest determined morality and the natural physical order was not seen as deserving any necessary respect'.<sup>26</sup> Illustrating the second perspective,

ecologist Geoff Park, writing in 1996, contrasted environmentally sensitive Maori with British settlers who followed, and tried to convert Maori to, 'a religion committed to getting away from nature'. More recently, Park claimed that the incoming British displayed a 'cultivated contempt' for 'nature'. They simply 'did not like the new space they had found'.<sup>27</sup>

Such accounts fit the international pattern identified by Simon Schama in which environmental historians depict 'land taken, exploited, exhausted; of traditional cultures said to have lived in a relation of sacred reverence with the soil displaced by the reckless individualist, the capitalist aggressor'.<sup>28</sup> Neither Grey nor Park saw settler religion as inspiring any appreciable awareness, liking or concern for the landscape or its existing inhabitants. None of the contributors to the seminal *Environmental Histories of New Zealand* challenged such assumptions, or paid much attention to religion, except, in passing, as legitimising colonial improvement projects.<sup>29</sup> Little wonder, then, that in 1997 a senior New Zealand government minister, Douglas Graham, sparked a nation-wide furore by declaring that whereas Maori had spiritual feelings for mountains, lakes and rivers, Pakeha (that is, non-Maori) did not.<sup>30</sup>

If Grey's secular interpretation is historically accurate, we should find little or no evidence of interaction and interconnection between Christian and environmental discourses, especially after about 1850. If, on the other hand, Park is right, we should find little evidence at any time during the nineteenth century of Christian discourse inspiring any appreciable interest, concern or respect for nature. We begin demonstrating the inadequacy of these views by exploring the coming of Christianity to the North Island. English Protestant missionaries from the Church Missionary Society (CMS) arrived in the Bay of Islands in the far north of New Zealand in 1814, followed by Wesleyan Methodists in 1822 and French Roman Catholics led by Bishop Pompallier in 1838. Living in a Maori world largely on Maori terms, the missionaries made little impact until around 1830.

## MISSIONARIES, MAORI AND THE NATURAL WORLD

Agriculture played a key role in the CMS campaign to tame and 'improve' the landscape and its indigenous inhabitants. Although impressed by the acres of turnips, potatoes and kumara (sweet potato) that Bay of Islands Maori were cultivating with wooden tools in 1815, Samuel Marsden (1765–1838), the first leader of the CMS mission, believed that they would be better able to 'clear and subdue uncultivated land' once equipped with iron axes, hoes and spades. Furnishing Maori with 'the means of raising many hundreds' of pounds of potatoes struck him as better than giving '100 lb' merely to satisfy their 'immediate wants'.<sup>31</sup> Humanitarian concern motivated Marsden's enthusiasm for agricultural 'improvement'. Aware that the Maori population was declining as



a result of European contact, he hoped to help Maori keep themselves well-fed and healthy. Missionaries elsewhere in the empire, such as the British Baptist William Carey in India, disseminated European agriculture and horticulture for similar reasons.<sup>32</sup>

The intertribal musket wars that exploded during the 1820s, killing thousands, provided extra incentive. Convinced that 'agriculture alone offers a substitute' for war, Marsden tried to persuade his patron Hongi Hika (1772–1828), the powerful Ngapuhi fighting chief who launched the musket wars, to 'become a great farmer', grow 'rich in provisions' and peacefully 'increase his power and influence on New Zealand'. Yet 'nothing but war', Marsden noted ruefully, would satisfy Hongi's 'active spirit'.<sup>33</sup>

Despite Hongi's disdain, missionaries kept up their campaign to persuade Maori to beat swords into ploughshares during the 1830s and beyond.<sup>34</sup> In 1836, the CMS catechist John Flatt (1800–90) wrote of his desire 'to drive the Christian plough in', and of the usefulness of his 'having had ten year's practice in Horticulture and Agriculture in all its branches'.<sup>35</sup> He felt 'great reason to hope that the happy period is not far distant when these poor heathen shall learn war no more – but sit every man under his vine and under his fig tree' to receive the Word of God. To speed the arrival of that day, Flatt found no better 'subject to converse with the New Zealander' than 'the very flowers & leaves of the Garden & Field [which] are emblematical of higher things when grace teaches us to make them so'.<sup>36</sup> Similarly, Jewish trader Joel Polack told Maori at Kaipara in the far north of the North Island that once furnished with 'implements of iron to pursue the labours of agriculture' they would, he hoped, make 'war no more'.<sup>37</sup>

On Ruapuke Island off the southern South Island coast, the German Lutheran missionary Rev. Johann Wohlers (1811–85) of the North German Missionary Society believed that 'untamed nature [should be made] subservient to the use of men and do service to God'. Determined to make wild nature bountiful, he introduced European farming practices to the local Kaitahu people, encouraging them to take up the good book and the plough. The early Otago surveyor Frederick Tuckett (1807–76), a Quaker active in the London-based Aborigines Protection Society, supplied Wohlers and Kaitahu with a mill and other agricultural equipment.<sup>38</sup>

From the 1830s on, growing numbers of Maori throughout the country made the missionaries' cultural revolution their own – at their own pace and on their own terms. To modernising Maori Christians, often younger chiefs or ex-slaves educated in mission schools, Christianity offered a way out of the bloody spiral of revenge warfare of the 1820s. Now they pursued peace, power and prosperity through religion, literacy and agriculture, competing with other tribes to host missionaries, buy Bibles, erect flour mills and sell produce for profit in local and overseas markets.<sup>39</sup>

Charles Darwin (1809–82), visiting the Bay of Islands at Christmas, 1835, welcomed the changes wrought by Maori and missionaries at the inland CMS mission station at Waimate. After walking miles across ‘uninhabited useless country’, he found ‘exceedingly pleasant’ the ‘sudden appearance of an English farm-house, and its well-dressed fields, placed there as if by an enchanter’s wand’. Beside the cottages of the ‘native labourers’ lay fields of potatoes and clover and ‘fine crops of barley’. Darwin was impressed by the ‘large gardens, with every fruit and vegetable which England produces’, with ‘many belonging to a warmer clime’, including ‘asparagus, kidney beans, cucumbers, rhubarb, apples, pears, figs, peaches, apricots, grapes, olives, gooseberries, currants, hops, gorse for fences, and English oaks’. Nearby lay a ‘thrashing-barn with its winnowing machine, a blacksmith’s forge’, agricultural tools, ‘a large and substantial water-mill’, and ‘that happy mixture of pigs and poultry, lying comfortably together, as in every English farm-yard’. Darwin noted approvingly that ‘native workmanship, taught by the missionaries’, had ‘effected this change’.<sup>40</sup> According to historical geographer R.P. Hargreaves, the Waimate mission, in which Maori played a vital role, gave ‘the major impetus to the introduction of European farming to New Zealand’.<sup>41</sup> Maori agriculture boomed between the 1830s and the 1850s, quickening the pace of environmental change. In the southern Africa context, Richard Grove has argued that Protestant missionaries, while encouraging conservation, often blamed indigenous Africans for environmental degradation.<sup>42</sup> Although New Zealand missionaries could fiercely criticise Maori behaviour, we have found little evidence of this kind of attitude in New Zealand.

Deploying natural knowledge for evangelical purposes did not preclude enjoying nature for its own sake. *Pace Park*, missionary religion was neither systematically indifferent nor hostile to nature. The Rev. William Colenso (1811–99), a CMS missionary-botanist, took ‘joy in contemplating the manifold forms in which the All-beautiful has concealed His essence – the living garment in which the Invisible has roved His mysterious loveliness’. Traversing the North Island in the 1840s with Maori guides in search of botanical specimens, Colenso delighted in ‘the purity of virgin morning’, the ‘sombre grey of a day of clouds’, and the ‘solemn pomp and majesty’ of the ‘Ruahine Mountain-range’.<sup>43</sup> Colenso sent many plants to British naturalists such as Darwin and Joseph Dalton Hooker. The latter regarded Colenso as an invaluable if idiosyncratic member of his global army of botanical fieldworkers.<sup>44</sup>

Elizabeth Stack (1829–1919), wife of the missionary James West Stack (1835–1919), loved collecting ferns and mosses as she travelled around the colony during the 1850s. The colonial secretary, Dr. Andrew Sinclair (1794–1861), a skilled botanist, helped Stack name her fern and moss specimens. Holidaying on Waiheke Island in the Hauraki Gulf, she marvelled at ‘the dear little birds’ which ‘sang exquisitely and filled the air with sweet melody, whilst the scented aromatic foliage of the trees and plants around me filled it with fragrance’. Sitting

down, she found it ‘delightful in the cool crisp morning air to read and think of God’s love where I was surrounded by so many proofs of it, and when my whole being was filled with such an overpowering sense of the sweetness and loveliness of God’s creation’. Stack later recalled these as the most enjoyable two hours of her life.<sup>45</sup>

Missionary families explored their new world together. The Rev. Richard Taylor (1805–73), a missionary-naturalist who corresponded with leading British scientific thinkers such as Darwin, Hooker and Richard Owen, collected shells with his daughter, Laura, whose diary contains pressed petals, leaves, feathers and sketches of natural history objects. On her fourteenth birthday, in 1847, Taylor gave her a microscope so she could examine God’s works more closely.<sup>46</sup> The microscope would ‘reveal some of the wonders of the minute portion of creation’, Taylor explained, ‘and will enable us to know somewhat more of the power of the Most High, whose hand has equally formed the vast orbs that roll through space, and the minute insect whose globe is contained in a drop of water’.<sup>47</sup>

Systematic colonisation accelerated after the Treaty of Waitangi made New Zealand a British colony in 1840. Slightly over half of all nineteenth century settlers emigrated from England. Most were Anglican. About a quarter, mostly Presbyterian, sailed in from Scotland. Roughly a fifth, mostly Roman Catholic, arrived from Ireland. The following section explores the religious images, ideas and language through which the settlers related to the natural world. *Pace* Grey, settler environmental culture cannot be understood without reference to the religious traditions they brought with them.

## THE FARTHEST PROMISED LAND

Many colonists regarded their new home as a Promised Land. According to social historian Miles Fairburn, the ‘single most common allusion’ to New Zealand in all promotional and settler literature was as a ‘Land of Milk and Honey’. This image, taken from the book of Deuteronomy in the Old Testament, described Canaan, the good land God promised His people.<sup>48</sup> In England during the 1870s, the National Agricultural Labourers Union urged rural labourers to ‘rush from the old doomed country to such a paradise as New Zealand ... A LAND OF OIL, OLIVES AND HONEY; – A LAND WHERE IN THOU MAY’ST EAT BREAD WITHOUT SCARCENESS: THOU SHALT NOT LACK ANYTHING IN IT’.<sup>49</sup> Scottish Presbyterian Jane Bannerman (1835–1923) described her new province of Otago in exactly this language shortly after arriving:

The Lord my God bringeth thee into a good land, a land of brooks, of water, of fountains and depths that spring out of valleys and hills – a land of wheat and vines, and fig trees and pomegranates, a land of oil olive and honey – a land

wherein thou shalt eat bread without scarceness thou shalt not lack anything in it. Beware that thou forget not the Lord thy God.

‘Truly’, reflected Bannerman, ‘this has been all to us.’<sup>50</sup>

## EDENIC NARRATIVES AND ACCLIMATISATION

Acclimatising useful and familiar plants and animals promised to make a good land better. Ever since the arrival of Captain Cook in the late-eighteenth century, Europeans had intentionally and unintentionally released a range of species, which altered the environment, sometimes drastically.<sup>51</sup> Acclimatisation accelerated after 1840, inspired by a vision of New Zealand as a better Britain in which colonists of all classes could hunt game animals and fish for trout and salmon surrounded by the familiar birds and trees of ‘Home’. A vision of recreating the harmony and abundance of the Garden of Eden inspired the more pious acclimatisers. As Henry Sewell, a prominent Canterbury Anglican, lawyer and politician put it during the early 1850s, ‘the first creation was a garden, and the nearer we get back to the garden state, the nearer we approach what may be called the true normal state of Nature’.<sup>52</sup>

On Kawau Island near Auckland, George Grey (1812–98), a moderate Anglican who played a leading role in the colony’s political, scientific, religious and cultural life, introduced British, North American, Australian and South African animals, including red deer, elk, zebra, wallabies, wild boars, peacocks, turkeys and monkeys. Plant acclimatisations included bamboo, lilies and a brilliant cornucopia of exotic flowers, shrubs and trees.<sup>53</sup> Strolling with Grey through his Kawau estate in 1885, visiting English historian J.A. Froude was startled by a huge black bull roaring six yards away. Grey, unruffled, ‘seemed to know that none of these creatures would molest us’, Froude noted with awe. Like Adam, Grey lived ‘on confidential terms with all living things of earth or air’. Native woodpigeons (*kereru* in Maori) ‘fluttered among the leaves above our heads’, enthused Froude, before settling again as ‘calmly’ as ‘in Adam’s garden before the Fall’.<sup>54</sup>

Images of an Eden-like land attracted migrants to New Zealand and continued to inform settler descriptions of the colony and visions of landscape modification. Sometimes the mythic structure of the Edenic narrative – unspoiled nature, disrupted by The Fall, followed by the Garden Restored – flourished even among commentators who otherwise eschewed religious language. In 1901, James Burgess, President of the Cape Egmont Horticultural Society, depicted pre-colonial Taranaki as a virtual garden of Eden. Before Europeans arrived, the forest along Taranaki’s west coast between Stoney River and Opunake harboured ‘a profusion of lovely palms and ferns’. In spring, the bush was ‘lit up by masses of the beautiful white clematis’. In the open land nearby, pigs introduced by Captain Cook snuffled through the undergrowth while ‘droves of cattle as wild

and wary as deer' and 'large numbers of pigeons, tuis, bell-birds and numerous other species' lived in the forest. But the coming of the European brought disaster. Impressed by the success of Maori cultivation, explained Burgess, the early settlers 'jumped to the conclusion that anything they chose would flourish'. They began 'clearing off the native growth' and planting without 'taking into consideration the effect that would be produced upon the climate'.

[A]las! this illusion [of 'plenitude'] was soon dispelled. In two years peaches became almost extinct, deciduous trees would only grow where sheltered from the southerly gales, by some eminence, the patches of native scrub left standing began to look unhealthy, whilst melons and other tender plants became very uncertain each year. The climate appeared to get worse every year, until about five years ago it culminated in two severe gales from the south . . . killing gumtrees, which had attained a height of fully 30 feet!; badly damaging, and even killing many of the macrocarpa, laurel and akeake; even the [pinus] insignis did not escape injury; and only the [pinus] maritima, cabbage palm and flax were uninjured. Thousands of fruit trees were utterly destroyed, and thousands more have since dragged out a miserable existence – unlovely and useless.<sup>55</sup>

After painting a fearful picture of Paradise Lost, Burgess urged his fellow settlers to restore the 'Garden of New Zealand'.<sup>56</sup> Convinced that afforestation would facilitate redemption, he called on the government to cultivate more trees than the 900 it had so far planted.<sup>57</sup> Edenic narratives pervaded Western culture during this period, and, as historian Candace Slater has shown, continue to inform much contemporary thinking about Amazonia.<sup>58</sup>

## THEOLOGIES OF NATURE

Many settlers looked on the natural world through spiritual lenses; theologies of nature, depicting the world as God's creation, shaped the way they thought and felt about their new home. European Christians had long seen the goodness of God in the beauty and bounty of nature.<sup>59</sup> The famous eighteenth century parson-naturalist, Gilbert White (1720–93), depicted the benign English countryside as testifying to the goodness and wisdom of its Creator in his classic *The Natural History of Selborne* (1789).<sup>60</sup> Colonists from all classes and creeds brought theologies of nature to New Zealand. To James Watkin (1805–86), Wesleyan missionary at Waikouaiti (1840–4), the 'views of Mountain and sea scenery' gave evidence of the Great Architect, who had 'weighed the mountains in scales, the hills in a balance, and who "meted out the waters with the hollow of his hand"'.<sup>61</sup> According to J. T. Thomson, a surveyor, man of science and moderate Anglican, the geological formation of New Zealand, a slow and stately process taking 'hundreds of thousands' of years, exemplified the providential 'care and beneficence of Nature's God'.<sup>62</sup> Dunedin timber miller John McLay (1840–1916?),

an evangelical Presbyterian, saw the intricate skeletal structure of the crayfish as displaying ‘God’s great Architecture Sublime and Incomparable’.<sup>63</sup>

The coming of Darwinism did not destroy religious views of the natural world. Many of the leading figures in the colony’s emerging scientific community continued to see the world as God’s creation long after embracing evolution.<sup>64</sup> In 1862, Julius Haast (1822–87), Canterbury provincial geologist and an active Lutheran, expressed delight that the settlers flocking to view his geological specimens in the Canterbury Museum were learning ‘in the contemplation of God’s works, that all that has been made is indeed “very good”’.<sup>65</sup> James Hector (1834–1907), the leading government scientist, told the 1891 meeting of the Australasian Association for the Advancement of Science that scientists aimed to discover ‘the great laws of order’ by which ‘the great Supreme Power’ had created the universe.<sup>66</sup> A year later, Thomas Kirk, a leading Baptist layman, expert botanist and conservationist, extolled the splendour of the great Kauri tree as illustrating the majesty of the Creator.<sup>67</sup> To G.M. Thomson (1848–1933), science educator, politician, mollusc expert, evolutionist and elder at Dunedin’s Knox Presbyterian Church, investigating nature honoured its Creator.<sup>68</sup> In 1901, he presented to the Otago branch of the New Zealand Institute a paper titled ‘Tongues in trees, books in the running brooks, Sermons in stones, and good in everything’ in which he expressing delight at the natural beauty of the area surrounding Otago harbour, and his dismay at pollution and the loss of native plants.<sup>69</sup>

Many artists and creative writers depicted the natural world as God’s good creation. Around 1886, the Rev. John Kinder (1819–1913), the Master of the Church of England Grammar School in Auckland, painted ‘The Wairoa near Lake Tarawera with Mission Chapel of Te Mu, January 4 1866’ (Auckland Art Gallery). Kinder highlighted the presence of Christianity in the new land by setting the bright white of the mission chapel over against the dark green bush and the grey of the sky. A rainbow swept down from the dark sky over the chapel to settle on the newly Christian Maori village. An ancient Biblical symbol of God’s covenant to His people, the rainbow drew New Zealand, and Maori, into the age-old drama of Judeo-Christian history.<sup>70</sup> In his photographic work, too, Kinder highlighted the presence of churches in the landscape.<sup>71</sup>

Alfred Sharpe (1836–1908) sailed to New Zealand in 1859, moved to Australia in the late 1880s, and was active in both countries as an artist, environmentalist, poet and park designer. Sharpe’s views were strongly shaped by the writings of art critic and social commentator John Ruskin (1819–1900). For romantic theists such as Ruskin and Sharpe, ‘God’s presence was revealed through an aesthetic awareness of nature’s beauty’.<sup>72</sup> Sharpe extolled trees as ‘the most beautiful and useful of God’s creations’,<sup>73</sup> a view that found expression in poems such as ‘The Forest Temples of New Zealand’ (1888):

Temples reared by human hands  
May be grand and may be fair;

But who worships Nature's God  
 Never worships truly there.  
 He to forest temple goes,  
 From all human things apart,  
 And he gives God service there.  
 Not from lip, but from the heart.<sup>74</sup>

Sharpe regarded forests as ideal places of worship because they were unspoiled by humans.<sup>75</sup> Religious romantics generally preferred pristine nature to what they saw as the artificiality and corruption of urban-industrial society. Regarding the New Zealand landscape as 'special and unique', Sharpe exhorted local artists to 'reproduce Nature here as she is, ere her originality disappears' before 'imported vermin and vegetation'.<sup>76</sup> An ardent conservationist, in 1880 he excoriated the 'monstrous vandalisms' of those who, recklessly felling young oaks, were turning the 'loveliest part of the [Auckland] domain' into the 'abomination of desolation, spoken of by Daniel the Prophet' in the Bible.<sup>77</sup>

According to literary historian Julian Kuzma, poet Hubert Church (1857–1932) dedicated stanza after stanza to illuminating 'the presence of God in the New Zealand environment'.<sup>78</sup> Artists such as John Gully (1819?–88) painted the Sublime, while explorers, ramblers and, later, trappers, skiers and mountaineers experienced God's works first hand and up close.<sup>79</sup>

From the 1880s, the Young Women's Christian Temperance Union (YWCTU), now known largely for its campaign for universal women's suffrage, used romantic theism to promote nature protection. Land settlement mattered, members believed, but so did conservation and the promotion of natural beauty. Members of the YWCTU drew on aesthetic arguments from Ruskin, who saw nature as reflecting God's glory, to promote nature protection and the development of urban parks. Women were also actively involved in garden-making, with Protestant church periodicals such as the *Christian Outlook* carrying articles on the work of English landscape designer Gertrude Jekyll in its women's pages.<sup>80</sup>

## NATURE IN CHURCHES

As such evidence suggests, one site in which Christian and environmental discourses and practices intertwined was the church. In New Zealand, as throughout the West, women and children numerically dominated most congregations.<sup>81</sup> Historians seeking to develop a well-rounded and socially inclusive picture of modern environmental cultures would do well to explore such sites.

Natural objects such as flowers appeared in churches mainly through the efforts of women.<sup>82</sup> At harvest festival, an imported English tradition, carrots dangled from church ceilings, pumpkins surrounded pulpits, and apples festooned aisles. At Tapanui in rural Southland, the Wesleyan Harvest Thanksgiving of 1892 boasted a 'grand display', including 'vegetables, grapes, wheat, oats' all

'tastefully arranged'. A huge pumpkin weighing 43 pounds showed that God showered His blessings on Tapanui's English Methodist minority as surely as on its Scottish Presbyterian majority. Colonial Presbyterians at first eschewed floral arrangements and harvest festival celebrations, reflecting classical Calvinist suspicion of natural objects as potentially idolatrous. By the early twentieth century, however, Presbyterians were arranging flowers and celebrating harvests as enthusiastically as adherents of most other churches. Most New Zealand urban homeowners owned enough land to grow their own flowers, fruit and vegetables, and harvest services flourished, often attracting larger congregations than regular Sunday services. The quarter acre town section with its large and productive vegetable garden became a mark of status amongst New Zealanders, with families advertising their produce at church services and at Agricultural and Pastoral shows.<sup>83</sup>

Imported Eurasian fruits and vegetables were not the only items on display. In keeping with Britain's 'fern craze', 'pteronmania', as it became known, swept through the country from the 1860s, with women introducing native ferns into churches.<sup>84</sup> All of these activities bore testimony to the blessings of Providence and the practical know-how and green fingers of the citizens of 'God's Own Country', as populist Premier Richard 'King Dick' Seddon called it.

Preachers used nature to illustrate moral and spiritual truths, a tradition rooted in the Bible and the teaching of Jesus. The Rev. James Kirkland, a Presbyterian, felt 'glad', because the 'singing birds' he heard at Taieri Mouth (South Otago) 'made a text for me'. The birds were happy, he told his congregation, because they had 'not an idle moment – flying – building – feeding – singing'. Since God 'gave us work to do' and 'laws to keep', busy birds illustrated the spiritual lesson that idleness bred unhappiness.<sup>85</sup> The Rev. D.S. Mason chose Exodus 3.2 to illustrate how 'God revealed his Grace + power' in 'a common bush' – the acacia.<sup>86</sup>

Sunday School teachers used illustrations from nature to enlighten children. Each Spring Sunday, the Rev. Rutherford Waddell (1850/52?–1932), a Christian socialist from an Irish Presbyterian background, preached a sermon using natural symbolism. '[W]e are like the grasshopper and the plant . . .', he told Sunday School pupils at his St. Andrews Church in Dunedin: 'Just as the flower tries to get up nearer to the sun, so that is what you and I should try to do – to get nearer to Christ, nearer to what He is, nearer to what He does and nearer to Him as our Ideal'.<sup>87</sup> New Zealand children also encountered God-in-nature in state primary schools. According to historian of education Colin McGeorge, the officially secular 1877 Education Act, 'did not, in practice, rule out references to God in locally produced texts or in the *School Journal*'. Drummond's elementary science text of 1902, for instance, noted that nature revealed the Creator's wise plan.<sup>88</sup>

Some young colonists took these lessons to heart. Ernest D'Esterre, the second prize winner in a 1904 competition ran by the *Presbyterian Young Men's*



*Magazine*, extolled mountains as ‘the natural cathedrals of the earth; their spires are ever raised in lofty majesty, their choirs silent and yet ever proclaiming the glory of God’. To the ‘student of Nature whose mind has been trained in the recognition of the Divine revelation in Nature, their towering fanes are superb lessons of perfection and completion’. The more he studied ‘the vast volume of Nature’, reflected Esterre, ‘the more strongly am I forced to the conclusion that man, in the presence of Nature, is standing at the portals of a mysterious, grand and awe-inspiring temple of knowledge, the perfect beauty of whose architecture a human life is a thousand years too brief to comprehend in full’.<sup>89</sup>

Following the New Zealand government’s decision to introduce Arbor Day into the official holiday calendar in 1892, many protestant churches encouraged their communities to observe it.<sup>90</sup> Beginning in the United States, where it emerged in Nebraska in 1872 and gradually spread, Arbor Day promoted tree planting as a patriotic activity that aimed to instil in schoolchildren an ethic of conservation.<sup>91</sup> According to the New Zealand conservationist Alexander Bathgate (1845–1930) writing in 1891, by stimulating their interest in nature and by cultivating a community spirit, Arbor Day had a ‘refining influence’ on ‘youthful colonists’.<sup>92</sup> It also served more utilitarian motives, providing timber for fuel and building and, many believed, increasing rainfall, preventing soil erosion and afforesting arid regions.<sup>93</sup>

The Presbyterian *Christian Outlook* magazine argued that although ‘Arbor Day has no place in the ecclesiastical year’ as yet, ‘it deserves it. It is a force that makes for Christianity’. Children out in the fresh air investigating and enjoying God’s world, enthused the editor, ‘would do more to develop and culture their finer tastes than the dry curriculum of books and standards’. Trees had a special place in the Bible, he reminded readers. God’s Word ‘opens with the story of a tree’ in the Garden of Eden and closes with spiritual ‘life renewed’ by Jesus’ sacrifice on a tree.<sup>94</sup> Church leaders often led Arbor Day celebrations. Samuel Nevill (1837–1921), Anglican Bishop of Dunedin, led tree planting ceremonies in Dunedin, while at Kaitangata, South Otago (see Figure 1). In 1896, the Revs. R. Fairmaid and J. Somerville inaugurated Arbor Day with short addresses to the gathered community.<sup>95</sup> Church involvement in what became an important civic occasion should come as no surprise. According to historian Leigh Eric Schmidt, most American protestant churches ‘gave their blessing to such civic ceremonies’. Some Sunday Schools undertook their own tree planting, and one enthusiastic pastor even required proof of tree planting before confirmation!<sup>96</sup>

## STEWARDSHIP AND ANIMAL WELFARE

Christian concern also extended to animals. Opposition to cruelty to animals on religious grounds had burgeoned in eighteenth century Britain, and many colonists brought this humanitarian tradition with them.<sup>97</sup> William McCaw (1818–1902),



FIGURE 1. Samuel Nevill, Anglican Bishop of Dunedin, planting a tree at Kaitanga, South Otago.

a devout self-educated Calvinist shepherd who emigrated to south Otago from Scotland in 1880, believed that practical godliness required farmers to look after their animals properly, a view he publicised in a regular Scottish newspaper column. Although in New Zealand lower ratios of shepherds to stock meant that more sheep died than in Britain, McCaw upheld the importance of animal welfare in his adopted home.<sup>98</sup>

Organisations for enhancing animal welfare sprang up throughout New Zealand in the wake of settlement. The first meeting of the Society for the Prevention of Cruelty to Animals (SPCA) took place in Wellington in 1855 and by the early 1880s SPCA branches and animal shelters had sprung up around the country.<sup>99</sup> Church leaders were prominent founding members in many centres.<sup>100</sup> At the annual general meeting of Otago's SPCA in 1895, for instance, Anglican Bishop Samuel Nevill declared it 'a blot upon the community that there should be a need for' such an organisation. The 'moral forces which ought to have been developed by the religious teaching given for so many years', said Nevill, 'should have rendered it impossible that men could be found who would even to a small degree tyrannise [sic] the good creature of God'. Humans must recognise their responsibility for 'the good of every creature God had made'.<sup>101</sup>

Religious women played prominent roles in animal welfare movements. As historian Kelly Menzies has shown, campaigns conducted by New Zealand's

mostly Protestant first wave feminists in the 1890s and 1900s included opposition to the plumage trades and vivisection. Presenting such activities as ‘contrary to fundamental Christian morals’, women played active roles in many SPCA branches.<sup>102</sup>

Some professional scientists shared such concerns. The colony’s leading evolutionary biologist, F.W. Hutton (1836–1905), a devout liberal Anglican who lectured in natural science at the University of Otago before becoming professor of biology at Canterbury College, argued in 1876 that Darwinism had important moral and spiritual implications. By showing that humans and animals alike had evolved from earlier forms of life, Hutton argued, evolution required Christians to extend to animals Jesus’ teaching about the necessity of practising care and compassion.<sup>103</sup> The evidence presented in this section suggests that, in the case of nineteenth century New Zealand at least, historian David Hancocks has overstated his claim that Christianity led to ‘arrogant and large scale destruction’ and abuse of animals.<sup>104</sup>

#### DOMINION THEOLOGY AND IMPROVEMENT

We do not wish to paint a misleadingly pious or romantic view of settler attitudes to the natural world. The material forces and interests driving settler capitalism cannot be underestimated. By no means all colonists were Christian. A small but vocal freethinking minority rejected Christianity, attacked the churches, and advocated systematically developing the colony’s natural resources for secular, utilitarian reasons. Charles Southwell, for example, left behind a remarkable career as early-Victorian England’s most spectacular atheist to settle in Auckland in 1856. In the *Auckland Examiner*, a newspaper he founded and edited, Southwell called for systematic colonisation and the rapid exploitation of the country’s mineral, agricultural, and industrial resources in order to make it the ‘brightest jewel’ in the ‘British Crown’. He identified three enemies of his vision of New Zealand as a prosperous secular paradise for ordinary (white settler) people. Maori Christians, missionaries and humanitarian officials, he claimed, had forged an unholy alliance that, taking Maori rights and the Treaty of Waitangi absurdly seriously, obstructed prosperity and progress. Southwell exhorted fellow colonists to obtain and develop Maori land however they could, if necessary by defying the law.<sup>105</sup>

Yet Southwell’s strident secularism and violent hostility toward Maori and missionaries isolated him. More respectable settlers invoked Biblical images and ideas as well as practical, utilitarian considerations to sanction improvement projects. Many deployed dominion theology – the idea, derived from the Genesis account of creation, that God gave humanity the task of taking dominion over the earth to make it fruitful and productive – to legitimise environmental transformation. In 1848, for example, the *Otago Colonist* exhorted settlers to

take dominion over the newly-founded province of Otago in the southern South Island. Waxing lyrical about the ‘vast tracts which are waiting for the reception of man’, the writer quoted Genesis chapter one: ‘The injunction and blessing . . . is yet in progress of fulfilment, – “Be fruitful and multiply and replenish the earth and subdue it”’.<sup>106</sup> The colony’s Governor, Sir George Bowen (1821–99), an Anglican, paraphrased the same verse (Genesis 1: 28) when inaugurating the New Zealand Institute (later the Royal Society of New Zealand) at Wellington in 1868. Scientific knowledge of chemistry, geology, botany, agriculture and horticulture, Bowen declared, would help the colonists in ‘subduing and replenishing the earth’.<sup>107</sup> The Rev. Thomas Burns (1796?–1871), Free Church leader of Otago’s Scottish settlement, believed that God intended the colonists to make the land bountiful and productive. He envisioned

the noble plains of Otago some generations hence to mark the future herds and flocks that cover the upland pastures far away to the ranges of the snowy mountains – whilst the lower lying valleys are waving with the yellow corn and the pursuits of rural husbandry the pretty farms, ‘the busy mile’ and the happy smiling cottages by the way side or nestling among the trees in some ‘bosky deyle’ or sylvan dell – and all that a God fearing people – with a bold peasantry their country’s pride and an aristocracy whose highest honour it is that they are the disciples of Christ.<sup>108</sup>

Settler-politicians invoked dominion theology to call for improving wasteland areas. As Captain Fraser told the Legislative Council, ‘God intended the land for men and they must put men on it’.<sup>109</sup> Such aims were promoted in wasteland regulations encouraging Europeans to develop fallow ground and in church leases stipulating measures such as fencing that upheld the importance of improving landscapes.<sup>110</sup>

The idea that the colonists had a God-given duty to improve the land by making it bountiful and productive lay at the ideological heart of ‘ecological imperialism’. Settler discourse of ‘development’, ‘progress’ and ‘improvement’ cannot be understood apart from the Christian beliefs and assumptions that framed and sanctioned such concepts. Many saw clearing bush, draining swamps, and introducing exotic flora and fauna as their God-given duty. Hardly anyone questioned the necessity for ‘improvement’, ‘development’, or ‘progress’ in principle.

Yet this does not imply that nobody criticised the environmental consequences of colonisation in practice. From the 1850s, a growing group of Protestant community leaders criticised the unexpected and undesirable outcomes of improvement projects almost as soon as these became apparent. Their commitment to improving the land, and making it bountiful and productive, encouraged them to criticise and attempt to reform degrading and destructive practices. Such colonists, most of whom were committed Protestant churchmen and community leaders, believed they had a responsibility to make the natural world more fruitful,

bountiful and productive than it had been, not less. Dominion and stewardship were less polar opposites than reverse sides of the same coin.

New Zealanders were not unique in wrestling with the unexpected and undesirable consequences of anthropogenic environmental change. As Grove has shown, extensive deforestation of tropical islands led some Europeans, especially Calvinist Protestants, to condemn environmental destruction as sinful and irresponsible.<sup>111</sup> A brief case study of W.T.L. Travers (1819–1903), a lawyer, politician and naturalist from an Irish Protestant background, suggests that such concerns also flourished in New Zealand – arguably the most Protestant, Scottish and Calvinist culture in the world outside of Scotland. Like many enlightened Protestants of the day, Travers believed in taking care of God’s world even while transforming it.

The son of a major general in the British army, Travers was born at Castlevew, near Newcastle, County Limerick, Ireland. After working as a lawyer, he emigrated to Nelson, New Zealand, with his wife and two children, in 1849. There, he practised law and later represented Nelson, Christchurch and Wellington electorates in the House of Representatives (HR) between 1853 and 1878. His main passions remained exploration, acclimatisation and natural history. With his son Henry, he explored the Nelson region in the north of the South Island, collecting grasses and alpine flowers, carefully noting the altitude, and sending them to J.D. Hooker at the Royal Botanic Gardens, Kew. One of the founders of the New Zealand Institute, Travers drafted the statute under which it was established in 1867, and served as one of its governors until his death. He also drafted the 1869 Act establishing Wellington’s Botanic Garden, and served on its board for 22 years. Travers served as chief spokesperson for science in the HR. In all, he published some 40 articles on botany, ornithology, geology and ethnology in the *Transactions and Proceedings of the New Zealand Institute*, the colony’s leading scientific journal.<sup>112</sup>

Travers delivered many public talks, notably a series of three lectures at the Colonial Museum, Wellington, between August 1869 and August 1870 that explored the impact of ‘civilised races’ on the New Zealand environment. The series attracted a large audience, including the colony’s governor, Sir George Bowen, and many members of parliament.<sup>113</sup> Some historians, noting Travers’ simultaneous enthusiasms for Darwin’s ‘laws governing the ‘struggle for life’’ and for natural theology have suggested that he embraced ‘incommensurable positions’. According to historical geographer Graeme Wynn, Travers’ enthusiasm for ‘the material progress of his age’ often ‘deflected him from his concern with the environmental consequences of these developments’.<sup>114</sup> We contend, rather, that depicting Travers as a muddle of contradictions reflects insufficient historical understanding. Like most enlightened Protestants of the time, Travers believed in science and religion, progress and piety, colonisation and conservation.

No militant agnostic, Travers presented the natural laws elucidated by men of science as the work ultimately of the ‘Great Author of all’. He drew upon

the work of Charles Darwin, Charles Lyell, J.D. Hooker, John Lubbock and G. P. Marsh to explain the impact of introduced European species on the local environment. Introduced species, Travers argued, were often displacing indigenous flora and fauna. The large and aggressive European rat, for example, was rapidly supplanting the small and vulnerable kiore (Maori rat). Moreover, 'large herds of cattle and flocks of sheep' now ranged over 'great tracts of native pasture' previously 'lying idle' and the 'smiling farms and busy marts' of the 'vigorous races of Europe' were replacing the 'rough clearing and hut of the savage'. Travers sang a paean of praise to progress. As one of New Zealand's most influential men of science, closely connected to the colonial state, he gave colonisation the sanction of science.

Yet Travers saw loss as well as gain, danger as well as opportunity, in the changes he catalogued. Already, he warned, an introduced species of aphid had devastated the colony's cabbage, cauliflower, turnip and other vegetable crops. Many settlers, he charged, knew far too little about the 'uses or value' of the indigenous flora and fauna. Their 'indiscriminate and reckless destruction of the forest and many other of the natural productions' of their new home, including native grasses and flax (*phormium tenax*), had already done 'immense direct injury'. Slashing and burning vast areas of bush and forest had often turned rivers into 'raging torrents' that required 'difficult and expensive engineering works' to control them. Already 'bald hills' and 'deseccated [sic] plains' were replacing the 'rich vegetation' of pre-colonial days. Travers used biblical examples to reinforce these warnings. The 'plains of Babylon and Nineveh, and those parts of Judea', once 'truly described' as 'flowing with milk and honey' had been 'converted into a howling desolation'. The same fate awaited New Zealand, Travers warned, unless colonists made 'full atonement', and took more seriously the 'sacred trust' placed in them by the Almighty. They must 'preserve' the colony from the 'destructive processes' that 'civilized man, in ignorance or wantonness, unhesitatingly applies in his attempts to bring new countries under the dominion of his wants'.<sup>115</sup> Travers' popular science lecture doubled as an environmental sermon; biblical images, Protestant ethics and scientific analysis formed a potent and compelling blend, designed to galvanise a conservationist conscience.

Protestant men of science such as Travers moved easily between scientific institutions such as the Colonial Museum and local churches to spread the word. In a public lecture titled 'Man's relation and duties to organic life' delivered early in September 1870 at the Presbyterian church in Willis Street, Wellington, Travers elaborated the religious convictions that underpinned his concept of environmental responsibility as a 'sacred trust'. He had minimised explicitly Christian language in his colonial museum science lecture, reflecting a desire, common among colonial men of science, to avoid potentially divisive squabbles over dogma and doctrine. In church, however, he gave his religious convictions freer rein. Civilised colonists, he declared, must recognise the 'obligations'

God had placed on them as 'intelligent and responsible' beings to take care of the natural world even while transforming it. By 'honoring [sic] the works of his creation' they 'honored [sic] the Creator'. A 'large audience' listened 'with great attention'. Travers' friend James Hector, director of the Geological Survey, Manager of the New Zealand Institute, and the leading government scientist, delivered the vote of thanks.<sup>116</sup> Six years earlier, Travers had told the Canterbury Acclimatisation Society that 'wanton destruction either of imported creatures or of those indigenous to the province must be counted a sin against Him who provided all things for our good'.<sup>117</sup>

Travers was no lone voice crying in the wilderness. In Christchurch, T.H. Potts (1824–1888), a sheepfarmer, naturalist and committed Anglican churchman, regularly warned his fellow settlers against wantonly destroying native flora from 1858, shortly after arriving from England. Entering parliament in 1866, he called for the conservation of native forests. Fascinated by New Zealand's native birds, which he called by their Maori names in the regular natural history column he wrote for the *New Zealand Country Journal*, Potts exposed the shocking toll taken by some local scientific and museum collectors. In 1872, he proposed that Resolution Island be set aside as a reserve for native flora and fauna 'under tapu [set apart as sacred, in Maori] from molestation by dog and gun'. An 1878 article on 'National Domains' helped galvanise the foundation of national parks in New Zealand from 1894. Potts' writings, appearing in scientific journals as well as popular magazines, bubbled with interest in New Zealand's native plants, animals, landscape and the indigenous Maori people. They breathed the same spirit of reverent delight in nature as fellow Anglican Gilbert White's *Natural History of Selborne*.<sup>118</sup>

From the 1850s, as environmental problems became apparent, a growing body of settlers agreed with Travers and Potts that ignorant and irresponsible human action was destroying landscapes and climates, that deforestation was increasing flooding and soil erosion, lessening rainfall, increasing temperatures and altering climatic patterns.<sup>119</sup> Early Christian visions of making the new land bountiful and productive were being threatened by the improvement projects the colonists themselves had launched. The number of those concerned about the environmental consequences of colonisation began to burgeon. Austrian naturalist Ferdinand von Hochstetter (1829–84), who also studied theology as well as geology at Tübingen University, argued in 1867 that careful conservation of forests would ensure that New Zealand's settlers, blessed with 'a fertile country', would not, 'by a criminal want of foresight' turn it into 'a desert'.<sup>120</sup> Deforestation must not 'turn the country into a desert to the detriment of whole generations to come', warned Charles O'Neill in 1873, as he introduced into parliament the Conservation of Forests Bill.<sup>121</sup> Landowner and leading Congregationalist layman Josiah Clifton Firth (1826–97) implored settlers to plant trees in order to prevent New Zealand becoming 'an arid desert'.<sup>122</sup> Ruining reckless deforestation, Dunedin timber miller John McLay, an evangelical Presbyte-

rian, condemned ‘the cruel Ruthless hand of man’ for cutting down trees and ‘destroy[ing] God’s beautiful work – all for the lust of money that sends so many to destruction’.<sup>123</sup>

#### W.H. GUTHRIE-SMITH AND *TUTIRA*

Our final case study focuses on New Zealand’s best-known environmental writer, W.H. Guthrie-Smith (1862–1940). He grew up in lowland Scotland, probably attending the Church of Scotland, before coming to New Zealand in 1880, and taking up a run at Tutira, a sheep station in Hawke’s Bay, on the east coast of the North Island.<sup>124</sup> Decades of farming, during which he used fire, spade, axe and seed to turn Tutira into a productive sheep station, drew Guthrie-Smith into an intimate relationship with the landscape. Leading environmental historian William Cronon has lauded Guthrie-Smith’s ‘acutely sensitive environmental awareness’, his ‘passionate love of a small place’, and ‘honest commitment to knowing the environmental consequences of one’s actions in the world’.<sup>125</sup>

Guthrie-Smith’s enlightened Calvinism shaped his thinking about the relationship between God, humanity and the natural world. Classical Calvinism emphasised God’s sovereignty over the world; John Calvin’s ‘ultimate text’, notes Owen Chadwick, was ‘thy will be done’.<sup>126</sup> Reformed thinkers depicted human beings as part of the natural world, subject to natural laws and processes just like all other creatures. As Guthrie-Smith put it, he intended to ‘treat man as an occupant of the run’ without ‘fear or favour as a beast of the field’ in order to remind him ‘of his legitimate place in the scheme of things’.<sup>127</sup> He saw human beings not as Promethean titans standing above nature and free to do what they liked with it but as finite and fallible creatures whose knowledge of and power over nature had limits. If the colonists had been fully in control of the consequences of introducing new plants and animals into New Zealand, he argued, ‘Tutira would have been as the Garden of Eden, nourishing nothing but what is good for food and pleasant to the eye’. Yet such an ‘ideal condition’ proved ‘impossible to attain’ because the settlers ‘set in motion machinery beyond their ultimate control’. No human ‘legislation’, however rigorously enforced, could ‘regulate the dissemination of seeds’. Just as ‘the sun shines and the rain falls alike on the just and the unjust’ alike, said Guthrie-Smith, quoting Matthew 5: 45, so winds, birds, insects, ‘fleets, railroads and highways’ spread plant seeds across the country, regardless of human wishes.<sup>128</sup>

Guthrie-Smith believed that human beings, like other creatures, had evolved by natural laws and processes from earlier forms. Quoting from Darwin and Herbert Spencer, he displayed an accurate knowledge of evolutionary theory in his analysis of biotic change on Tutira. ‘Natural selection’ and ‘survival of the fittest’ explained why chickweed, garden cress, petty spurge and mouse-ear carast were spreading fast. Calling himself a ‘particular primate’, he analysed



his own Scottish and Irish ‘strains of breeding’ just as he did the bloodlines of his crossbred Polled Angus and Hereford cattle.<sup>129</sup> Embracing evolution did not shake Guthrie-Smith’s Presbyterian faith. As historians Mark Noll and David Livingstone have shown, several leading Calvinist theologians in Britain and America embraced evolution between the 1870s and 1920s.<sup>130</sup> Although Guthrie-Smith did not systematically set out his views on the relationship between science, philosophy and theology, a close reading of *Tutira* suggests that, like Calvinist theologians such as James Iverach and B. B. Warfield, he believed that God worked in the world mainly through natural laws and processes. He saw the laws of nature as the consequence – at the same time – of natural forces and divine action. References to ‘an all-wise Providence’ working in and through natural processes appear several times in *Tutira*. Biblical language and allusions abounded.<sup>131</sup>

Late in life, Guthrie-Smith questioned the environmental transformation he and his fellow settlers had undertaken. No champion of progress at any price, he wondered whether he had done the right thing in replacing native fauna with ‘domestic breeds of animals’, substituting ‘one flora for another’, and helping to melt ‘New Zealand through erosion into the Pacific. ‘Have I then for sixty years’, he asked, ‘desecrated God’s earth and dubbed it improvement?’<sup>132</sup>

In a sermonic conclusion, Guthrie-Smith hailed the dawn of a ‘new era of spiritual and aesthetic growth’. The ‘lamentable *laissez [sic] faire*’ age of ‘misuse of land and water’ was ‘passing away’, he hoped. Exhorting fellow settlers no longer to ‘mistreat this kindly old world of ours’, he hailed the dawn of a new and ‘wiser dispensation’ which, like ‘the scriptural grain of mustard seed’, would transform environmental attitudes and behaviour. The ‘future of mankind’, declared Guthrie-Smith, is to make our ‘life-home’ an ‘earthly paradise’. This required ‘cleansing its waterways, staunching its wounds and waste, conserving its fertility, renewing its forests, watering its deserts, beautifying it with colour and elegance of plant life’, and ‘reanimating its woods with song and movement of birds’.<sup>133</sup>

*Tutira* constituted not only an Edenic narrative but also a latter day *Natural History of Selborne*. Guthrie-Smith’s fascination with and respect for God’s world and its creatures shines through the book. As historian Bernard Lightman has argued, works of popular science that placed nature within a religious framework, far from disappearing, evolved in new ways after Darwin. Their popularity testified ‘to the continuing importance of religion to the reading public in the latter half of the nineteenth century and the belief that science was still an aid to faith’.<sup>134</sup> In New Zealand, this tradition found expression in what Cronon has called ‘one of the great English-language classics of environmental history’.<sup>135</sup> First published in 1921, *Tutira* was reprinted in 1926, 1940, 1969 and – simultaneously in New Zealand and the United States – in 1999.

## CONCLUSION

Many modern environmental historians have looked darkly on the ecological impact of European imperialism. Some, building on the work of Lynn White Jr, continue to identify Christianity as a, if not the, major culprit. This tradition, we have argued, is partly right. British 'ecological imperialism' in New Zealand cannot adequately be understood except in relation to the 'dominion theology' that often legitimised it.

Yet this is not the only story that can and should be told about the interconnections between Christian and environmental discourses. They interpenetrated and interacted in irreducibly diverse and complex ways. Protestant community leaders in a wide variety of settings – scientific societies, museums, churches, parliament, local government and voluntary associations – blended biblical images, Christian teaching, Protestant ethics, scientific arguments and practical considerations to galvanise environmental concern and a conservationist conscience. While committed to improvement and progress in principle, such persons – often educated, middle class Protestant laypeople – highlighted the unexpected and undesirable environmental consequences of improvement projects in practice. The 'wise use' conservationism they advocated may not have prevented environmental degradation as much as some recent environmentalists would have liked. But they deserve to be rescued from the condescension of posterity.

Placing this case study in one final context may lend it some larger significance. In recent years, ecologists such as Edward O. Wilson and environmental historians such as Max Oelschlaeger have argued that the world's environmental problems are unlikely to be ameliorated without enlisting the support of that vast – and rapidly growing – majority of people on the planet who follow the Abrahamic religions: Judaism, Christianity and Islam.<sup>136</sup> If Wilson and Oelschlaeger are right, then writing environmental histories that do justice to the virtues as well as the vices of such traditions, and thereby attracting rather than alienating the faithful, may help us all.

## NOTES

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<sup>1</sup> J.S. Polack, *New Zealand: Being a Narrative of Travels and Adventures during a residence in that country between the years 1831 and 1837*, Volume 1 (London: Richard Bentley, 1838), 101–3.

<sup>2</sup> Danny Keenan, 'Bound to the Land: Maori Retention and Assertion of Land and Identity', in *Environmental Histories of New Zealand*, eds. Eric Pawson and Tom Brooking (Melbourne: Oxford University Press, 2002), 246–60.

<sup>3</sup> John Stenhouse, 'Church, State and the New Zealand Wars, 1860–1872', *Journal of Law and Religion* 13,2 (1998–9): 483–507.

<sup>4</sup> Lynn White, Junior, 'The Historical Roots of Our Ecologic Crisis', *Science*, 155 (1967): 1203–7, here 1206, 1207. White portrayed St Francis of Assisi, a heretic influenced by Asian religious ideas, as promoting a dissident, eco-friendly spirituality which, unfortunately, had little influence. White's article provoked a flurry of debate and research. Major discussions include *Western Man and Environmental Ethics: Attitudes towards Nature and Technology*, ed. Ian Barbour (Reading, Mass.: Addison-Wesley, 1972); David Spring and Eileen Spring, *Ecology and Religion in History* (New York: Harper and Row, 1974); Robin Attfield, *The Ethics of Environmental Concern* (New York: Columbia University Press, 1983); *Theology and Technology: Essays in Christian Analysis and Exegesis*, eds. Carl Mitcham and Jim Grote (New York: University Press of America, 1984); Jeremy Cohen, "*Be Fertile and Increase, Fill the Earth and Master It*": *The Ancient and Medieval Career of a Biblical Text* (Ithaca: Cornell University Press, 1989), 15–18; Elspeth Whitney, 'Lynn White, Ecotheology and History', *Environmental Ethics* 15 (1993): 151–69; Peter Harrison, 'Subduing the Earth: Genesis 1, Early Modern Science, and the Exploitation of Nature', *The Journal of Religion*, 79,1 (1999): 86–109, doi: 10.1086/490346.

<sup>5</sup> Lynn White Jr., 'Christians and Nature', *Pacific Theological Review* 7 (1975): 6–11.

<sup>6</sup> Keith Thomas, *Man and the Natural World: Changing Attitudes in England, 1500–1800* (Oxford: Oxford University Press, reprint, 1996), 23.

<sup>7</sup> John Passmore, *Man's Responsibility for Nature: Ecological Problems and Western Traditions* (London: Duckworth, 1974).

<sup>8</sup> According to Worster, only a small minority dissented – see *Nature's Economy: A History of Ecological Ideas*, (2nd edition, Cambridge and New York: Cambridge University Press, 1993), 28–9. For similar views from North American scholars see William Leiss, *The Domination of Nature* (New York: George Braziller, 1972); Frederick Turner, *Beyond Geography: The Western Spirit Against the Wilderness* (New York: Viking Press, 1980); and Peter Marshall, *Nature's Web: Rethinking Our Place on Earth* (New York: Paragon House, 1994).

<sup>9</sup> Stephen Fox, *The American Conservation Movement: John Muir and His Legacy* (Madison: University of Wisconsin Press, 1985); Roderick Nash, *Wilderness and the American Mind*, (3rd edn, New Haven: Yale University Press, 1982).

<sup>10</sup> Clive Ponting, *A Green History of the World: The Environment and the Collapse of Great Civilizations* (New York: Penguin Books, 1993), especially 141–60.

<sup>11</sup> Don Garden, *Australia, New Zealand, and the Pacific: An Environmental History* (Santa Barbara: ABC-Clio, 2005), 67.

<sup>12</sup> John MacKenzie, *Empires of Nature and the Nature of Empires* (East Linton: Tuckwell Press, 1997), 1–30.

- <sup>13</sup> Robin Attfield, 'Christian Attitudes to Nature', *Journal of the History of Ideas* 44 (1983): 369–86, doi: 10.2307/2709172; idem, *The Ethics of Environmental Concern*.
- <sup>14</sup> Thomas, *Man and the Natural World*, 23–5.
- <sup>15</sup> Peter Harrison, 'Subduing the Earth', 90, 103, 108.
- <sup>16</sup> Richard H. Drayton, *Nature's Government: Science, Imperial Britain, and the 'Improvement' of the World*, (New Haven: Yale University Press, 2000), xvii.
- <sup>17</sup> C.A. Bayly, *The Birth of the Modern World, 1780-1914: Global Connections and Comparisons* (Oxford and Malden, Mass.: Blackwell, 2004), 330.
- <sup>18</sup> Richard Grove, *Green Imperialism: Colonial Expansion, Tropical Island Edens and the Origins of Environmentalism, 1600–1860* (Cambridge: Cambridge University Press, reprint, 1997); Drayton, *Nature's Government*; Sujit Sivasundaram, *Nature and the Godly Empire: Science and Evangelical Mission in the Pacific, 1795–1850* (Cambridge: Cambridge University Press, 2005); John M. MacKenzie, 'Missionaries, Science and the Environment in Nineteenth-Century Africa', in Andrew Porter, ed., *The Imperial Horizons of Protestant Missions, 1880–1914* (Grand Rapids: Eerdmans, 2003), 106–30; James Beattie, 'Drought, Rainmaking and Environmental Perception: Science, Nature and Religion in early Twentieth Century New Zealand', *Historical Social Research* 29,3 (2004): 82–103. Critics of the White thesis such as Thomas and Harrison did not venture beyond 1800. On the pre-1800 period, see Thomas, *Man and the Natural World*; Attfield, 'Christian Attitudes to Nature'. After 1800, see William Cronon, 'The Trouble with Wilderness; or, Getting Back to the Wrong Nature', in *Uncommon Ground: Toward Reinventing Nature*, ed. William Cronon (New York: W.W. Norton and Co, 1995), 69–90.
- <sup>19</sup> For two exceptions, see Mark Stoll, *Protestantism, Capitalism, and Nature in America* (Albuquerque: University of New Mexico Press, 1997); Leigh Eric Schmidt, 'From Arbor Day to the Environmental Sabbath: Nature, Liturgy, and American Protestantism', *Harvard Theological Review* 84,3 (1991): 303–4. In *The Wealth of Nature: Environmental History and the Ecological Imagination* (New York: Oxford University Press, 1993), Donald Worster took a slightly more nuanced position than in 1977, locating the origins of modern conservationism/environmentalism in 'left-wing Protestantism' as exemplified by John Muir. Unfortunately his discussion of religion (pp. 187–9) is confused and self-contradictory.
- <sup>20</sup> Pawson and Brooking, *Environmental Histories of New Zealand*.
- <sup>21</sup> William Cronon, 'Foreword', in Herbert Guthrie-Smith, *Tutira: The Story of a New Zealand Sheep Station* (Auckland: Godwit, fifth edition, 1999), xii.
- <sup>22</sup> Keith Sinclair, *A History of New Zealand* (Harmondsworth: Penguin, 1969 [1959]), 105, 287–8.
- <sup>23</sup> H.R. Jackson, *Churches and People in Australia and New Zealand, 1860–1930* (Wellington: Allen & Unwin/Port Nicholson Press, 1987), 43. For similar views, see Miles Fairburn, *The Ideal Society and Its Enemies: The Foundations of Modern New Zealand Society, 1850–1900* (Auckland: Auckland University Press, 1989), 177–8, 184; J.O.C. Phillips, *A Man's Country: The Image of the Pakeha Male – A History* (Auckland: Penguin, 1996), 63, 68.
- <sup>24</sup> Lloyd Geering, 'New Zealand Enters the Secular Age', in *Religion in New Zealand*, eds. Christopher Nichol and James Veitch (Wellington: Victoria University Department of Religious Studies, 1980), 238–63, here 261; for similar views see idem, *Faith's New*

*Age* (London: Collins, 1980) and *Tomorrow's God* (Wellington: Bridget Williams Books, 1994).

<sup>25</sup> A welcome exception, which unfortunately does not go beyond 1850, is Paul Shepard, *English Reaction to the New Zealand Landscape before 1850* (Wellington: Department of Geography, Victoria University of Wellington, 1969). Eric Pawson perceptively notes that 'most Pakeha settlers were both Christian in environmental outlook ... as well as conscious subscribers to the mores of an emergent capitalist outlook' but does not develop this insight – see 'Confronting Nature', in John Cookson and Graeme Dunstall, *Christchurch: Towards a City Biography 1850–2000*, (Christchurch: University of Canterbury Press, 2000), 60–84, here 63.

<sup>26</sup> Alan Grey, *Aotearoa and New Zealand: A Historical Geography* (Christchurch: Canterbury University Press, 1994), 12–22, 233–4, here 16, 234, 23.

<sup>27</sup> Geoff Park, *Nga Uruora: The Groves of Life: Ecology and History in a New Zealand Landscape* (Wellington: Victoria University Press, 1995), 133–9; Geoff Park, *Theatre Country: Essays on Landscape and Whenua* (Wellington: Victoria University Press, 2006), 49–50; for similar views see Evelyn Stokes, 'Contesting Resources: Maori, Pakeha, and a Tenurial Revolution', in *Environmental Histories of New Zealand*, 35–51, here 35.

<sup>28</sup> Simon Schama, *Landscape and Memory* (London: Fontana Press, an imprint of Harper Collins, 1996), 13.

<sup>29</sup> See, for example, Jim McAloon, 'Resource Frontiers, Environment and Settler Capitalism 1769–1860', in *Environmental Histories of New Zealand*, 52–68, here 53, for the kind of brief, passing reference that could also be found in several other chapters.

<sup>30</sup> Michael King, *The Penguin History of New Zealand* (Auckland: Penguin Books, 2004), 515.

<sup>31</sup> *The Letters and Journals of Samuel Marsden*, ed. J.R. Elder (Dunedin: Coulls, Somerville, and Wilkie, 1932), 100.

<sup>32</sup> Sanjoy Mukherjee, *William Carey's Contribution to Science* (Calcutta: Minerva Associates, 1999).

<sup>33</sup> *Letters and Journals of Samuel Marsden*, 337, 383.

<sup>34</sup> As Sujit Sivasundaram shows, many missionaries outside New Zealand followed a similar policy of Christianising non-Europeans by spreading European agricultural practices. See his 'Natural History Spiritualized: Civilizing Islanders, Cultivating Breadfruit, and Collecting Souls', *History of Science*, 39 (2001): 417–43.

<sup>35</sup> J. Flatt (Tauranga) to Wm. Jowett (London), 3 January 1837, Australian and New Zealand Missions 1808–1884. Microfilm 79-336, University of Auckland, N.Z. Glass Case 266.3C56g quoted in John Adam, 'The Elms Garden, Tauranga, Conservation Plan', October 1999, 2.

<sup>36</sup> John Flatt to Wm. Jowett, 24 Sept. 1836, Matamata, 3, Church Missionary Society. Microfilm 79–336.

<sup>37</sup> For a full discussion of Polack's views, from which this quotation comes, see Joel Polack, *New Zealand*, (Christchurch: Capper Press, 1974), vol. 1, 172–82.

<sup>38</sup> J.F.H. Wohlers, *Memories of the Life of J F H Wohlers: Missionary at Ruapuke, New Zealand: An autobiography, translated from the German by John Houghton* (Dunedin: Otago Daily Times and Witness Newspapers, 1895), 68, 139. On the 'work ethic' in nineteenth-century New Zealand, see Margaret McClure, 'Body and Soul: Heroic Vi-

sions of Work in the Late Nineteenth Century', in *Fragments: New Zealand Social and Cultural History*, eds. Bronwyn Dalley and Bronwyn Labrum (Auckland: Auckland University Press, 2000), 97–117.

<sup>39</sup> *Letters and Journals of Samuel Marsden*, 100, 170, 383; Paul Monin, *Hauraki Contested, 1769–1875* (Wellington: Bridget Williams Books, 2006).

<sup>40</sup> Charles Darwin, *The Voyage of the Beagle* (New York: Bantam Books, 1958), 367–8.

<sup>41</sup> R.P. Hargreaves, 'Waimate – Pioneer New Zealand Farm', *Agricultural History* 36,1 (1962): 38–45, quotation on 38.

<sup>42</sup> Richard Grove, 'Scottish Missionaries, Evangelical Discourses and the Origins of Conservation Thinking in Southern Africa 1820–1900', *Journal of Southern African Studies* 15,2 (1989): 163–87, doi: 10.1080/03057078908708196.

<sup>43</sup> Reverend William Colenso, 'Presidential Address', *Transactions and Proceedings of the New Zealand Institute* (hereafter *TPNZI*), 29 (1896): 133.

<sup>44</sup> Jim Endersby, "From Having no Herbarium." Local knowledge versus Metropolitan Expertise: Joseph Hooker's Australasian Correspondences with William Colenso and Ronald Gunn', *Pacific Science* 51,4 (2005): 343–58.

<sup>45</sup> Elizabeth West Stack, *Eliza's Journal: A Gentlewoman's experiences in New Zealand in the late 1850s*, ed. Virginia M. Perry (Dunedin: Virginia M. Perry, 1994?), 69, 22–3.

<sup>46</sup> Kathryn G. Mercer, 'The Missionary Naturalist: A Case Study of New Zealand Scientific Communication to 1870' (Master of Library and Information Science, Victoria University of Wellington, 2000), 35.

<sup>47</sup> Richard Taylor to Laura Taylor, 26 March 1847, Mission House (Wanganui) (typescript, Richard Taylor – Letter to Laura, Taylor Family Papers, MS-Papers-6817-01, Alexander Turnbull Library, [henceforth ATL]).

<sup>48</sup> See further Fairburn, *Ideal Society*; James Beattie, 'Lusting After a Lost Arcadia: European Environmental Perception in Otago, 1840–1860' (B.A. hons. diss., University of Otago, 1999).

<sup>49</sup> Quoted in Fairburn, *Ideal Society*, 23.

<sup>50</sup> Jane Bannerman, 'Reminiscences of her life to 1855' (typescript, part of J.C. Wilson family papers, MS-0536-2, Dunedin: Hocken Library [hereafter HL]), 48. Spelling corrected.

<sup>51</sup> R.M. McDowell, *Gamekeepers for the Nation: The Story of New Zealand's Acclimatisation Societies, 1861–1990* (Christchurch: Canterbury University Press, 1994); Ross Alan Galbreath, 'Colonisation, Science, and Conservation: The development of colonial attitudes toward the native life of New Zealand with particular reference to the career of the colonial scientist Walter Lawry Buller (1838–1906)' (Ph.D. diss., University of Waikato, 1989).

<sup>52</sup> W.D. McIntyre, ed., *The Journal of Henry Sewell, vol. 1, February 1853 to May 1854*, (Christchurch: Whitcoulls, 1980), 427.

<sup>53</sup> Sir George Grey to Lady Bunbury, 6 September 1876, (Kawarau, Dunedin: HL, MS 0312).

<sup>54</sup> Geoffrey Blainey, ed., *Travellers Tales of Early Australia and New Zealand: Oceana, the Tempestuous Voyage of J.A. Froude, 1884 & 1885* (North Ryde: Methuen Haynes, 1985), 162.

<sup>55</sup> James Burgess, 'Shelter Trees in Cape Egmont District', *New Zealand Farmer* (hereafter *NZF*), 22,11 (1901): 475.

<sup>56</sup> 'Taranaki, far and wide, has laid claim to the title, and been known as, the Garden of New Zealand. If the Cape district is to retain its climate to share in the proud title it must plant shelter on a large scale, and that without delay.' *Ibid.*, 475.

<sup>57</sup> *Ibid.*

<sup>58</sup> See, Grove, *Green Imperialism*; Candace Slater, 'Amazonia as Edenic Narrative', in *Uncommon Ground*, 115–16.

<sup>59</sup> See further, Thomas, *Man and the Natural World*; Jean Delumeau, *History of Paradise: The Garden of Eden in Myth and Tradition*, translated by Matthew O'Connell (New York: Continuum, 1995); John Hale, *The Civilization of Europe in the Renaissance* (London: Harper Collins Publishers, 1993), 512–83.

<sup>60</sup> Gilbert White, *The Natural History of Selborne* (Oxford: Oxford University Press, 1993).

<sup>61</sup> James Watkin, (20 May 1840), 'Journal, May 1 1840–December 30 1844', in G.C. Thomson Papers, Dunedin: HL, typescript, MS 440/4.

<sup>62</sup> Thomson, 'Sketch of the Province of Otago. A Lecture (being one of the series delivered at Dunedin)', *Hocken Pamphlet* 6,2, Dunedin, 1858, HL.

<sup>63</sup> John McLay, 'My Young Life in Otago', Part One of *Reminiscences in Papers: John McLay, Otago Peninsula* (Dunedin: Settlers' Museum, Copy 70 [original in private hands]), 22, 4. Passages punctuated and spelling corrected.

<sup>64</sup> John Stenhouse, 'Darwinism in New Zealand, 1859–1900', in R. Numbers and J. Stenhouse, eds., *Disseminating Darwinism: The Role of Place, Race, Religion and Gender* (New York: Cambridge University Press, 1999), 61–90.

<sup>65</sup> *Canterbury Standard*, 9 Oct. 1862, n.p.

<sup>66</sup> *The Press*, 16 Jan. 1891, 6.

<sup>67</sup> *New Zealand Baptist* 9 (1892): 179.

<sup>68</sup> Ross Galbreath, *Scholars & Gentlemen Both: G M & Allan Thomson in New Zealand Science & Education* (Wellington: Royal Society of New Zealand, 2002).

<sup>69</sup> G.M. Thomson, 'Tongues in trees, books in the running brooks, Sermons in stone, and good in everything', read before the Otago Institute on 12 Nov. 1901, Dunedin: HL, MS-0218.

<sup>70</sup> See, Malcolm Andrews, *Landscape and Western Art* (Oxford: Oxford University Press, 1999); Schama, *Landscape and Memory*.

<sup>71</sup> Ron Brownson, 'John Kinder's Photographs', *John Kinder's New Zealand*, ed. Brownson (Godwit and Auckland Art Gallery: Auckland, 2004), 87–8. The image discussed here is in John Kinder's *New Zealand*, plate 90, 140.

<sup>72</sup> Max Oelschlaeger, *The Idea of Wilderness: From Prehistory to the Age of Ecology* (New Haven and London: Yale University Press, 1991), 99.

<sup>73</sup> *Newcastle Morning Herald and Miners' Advocate* (hereafter *NMH*), 31 Oct. 1893, 3. On Sharpe's romanticism, see James Beattie, 'Alfred Sharpe, Australasia and Ruskin', *Journal of New Zealand Art History*, 29 (December, 2006), 38–56; on his biography, Roger Blackley, *The Art of Alfred Sharpe* (Auckland: Bateman and Auckland Art Gallery, 1992).

- <sup>74</sup> *NMH*, 6 Sept. 1888, 2. For Sharpe's religious views see the poem 'Earth is Fair', *NMH*, 20 February 1888, 2.
- <sup>75</sup> Alfred Sharp [sic], 'From Nature to Nature's God', *NMH*, 12 June 1888, 2. For other works expressing a similar viewpoint note, 'Evening in the Forest', *NMH*, 12 January 1882, 2; 'Temples not Made with Hands', *Observer and Free Lance*, 6 March 1886, n.p.; 'A Day with Nature', *NMH*, 1 February 1888, 2.
- <sup>76</sup> Quoted in Blackley, *Art of Alfred Sharpe*, 141.
- <sup>77</sup> *New Zealand Herald* (hereafter *NZH*), 5 October 1880, 6; 12 October 1880, 6.
- <sup>78</sup> On the Sublime, Hubert Church and colonial literature, note Julian Kuzma, 'Landscape, Literature and Identity: New Zealand late colonial literature as environmental text, 1890–1921' (Ph.D. diss., University of Otago, 2003), 43–113, here 105.
- <sup>79</sup> James Beattie, 'Romanticism, Art, Health and Conservation in Otago, 1840–1860', *Settlers' Newsletter*, 81, 1 (March, 2007): 1–4; Shepard, *English Reaction to the New Zealand Landscape*; Francis Pound, *Frames on the Land: Early Landscape Painting in New Zealand* (Auckland: Collins, 1983).
- <sup>80</sup> See further, Kelly Menzies, "'Natural Women": Land, Nature and the New Zealand First-Wave Feminists, 1880–1910', (B.A. Honours diss., University of Otago, 2005), 9–39.
- <sup>81</sup> Callum G. Brown, *The Death of Christian Britain: Understanding Secularisation, 1800–2000* (London; New York: Routledge, 2001); John Stenhouse, 'God's Own Silence: Secular Nationalism, Christianity and the Writing of New Zealand History', *New Zealand Journal of History*, 38,1 (2004): 52–63.
- <sup>82</sup> Jack Goody, *The Culture of Flowers* (Cambridge and New York: Cambridge University Press, 1993).
- <sup>83</sup> Alison Jane Clarke, 'Feasts and Fasts: Holidays, Religion and Ethnicity in Nineteenth-Century Otago' (Ph.D. diss., University of Otago, 2003), 200–207, here quotation, 205.
- <sup>84</sup> See Frances Loeffler, 'Pteridomania: a visual history of the fern in New Zealand', (M.A. diss. in Art History, Victoria University of Wellington, 2006); Tim Bonyhady, *The Colonial Earth* (Carlton, Victoria: Miegunyah Press, 2000).
- <sup>85</sup> Reverend James Kirkland, 'Sermons and Notes re (1 of 2), c.1881–1900', underlining in original. MS 3/127, DA5/8, Dunedin: Presbyterian Church of Aotearoa New Zealand Archives (hereafter, PCANZA).
- <sup>86</sup> Ex. III.2 'The Burning Bush'. Reverend D.S. Mason, *Sermons Book, with Index 1906–32*, 398/19/28, DC7/1, Dunedin: PCANZA.
- <sup>87</sup> Reverend Rutherford Waddell, 'The Children's Sermon', in 'Reverend Dr Rutherford Waddell, Children's Talks c.1906–1916' (Dunedin: PCANZA, 22 July, nd: I394/8, DC1/4). Waddell was minister of a Dunedin city Presbyterian church from 1877 to 1919.
- <sup>88</sup> Colin McGeorge, 'The Presentation of the Natural World in New Zealand Primary Schools, 1880–1914', *History of Education Review*, 23,2 (1994): 41–2.
- <sup>89</sup> 'The Lucerne of the South: Wakatipu and the Interior. The Giants of Milford Sound', *Young Man's Magazine* 6,2 (1904): 32.
- <sup>90</sup> See James Beattie and Paul Star, 'Forest Conservation and the New Zealand Landscape: Origins and Influences, 1870–1925', in *Landscapes and Communities*, eds. Tony Balantyne and Judith Bennett (Dunedin: Otago University Press, 2005), 17–29.



<sup>91</sup> Richard Sassaman, 'Early American Tree Planting: From Apple Seeds to Arbor Day', *Whole Earth Review*, 66 (Spring 1990): 1–4; Michael Williams, *Americans and Their Forests: A Historical Geography* (Cambridge and New York: Cambridge University Press, 1989), 382–3; Libby Robin, 'Days of Nature in Australia', *Australia's Ever-Changing Forests V: Proceedings of the Fifth National Conference on Australian Forest History*, eds. John Dargavel, Denise Gaughwin and Brenda Libbis (Canberra: Centre for Resource and Environmental Studies and The Australian National University, 2002), 324–41.

<sup>92</sup> *Hocken Pamphlets* 172, 3: 6. It was first published in the *Otago Daily Times* (5, 12 and 19 September 1891).

<sup>93</sup> A Government booklet advised that at the start of Arbor Day 'a short and appropriate address or addresses should be given by the Mayor and other prominent colonists, pointing out the great advantages resulting from an intelligent planting of trees'. See Department of Agriculture, *Arbor Day, 1894* (Wellington: Department of Agriculture, 1894), 6.

<sup>94</sup> *Presbyterian Outlook*, 1,25 (1894): 289.

<sup>95</sup> *Otago Witness* [hereafter *OW*], 20 August 1896, 25. In Queenstown: 'The children of the local Catholic schools also adorned the ground surrounding their schools and churches by planting a number of ornamental and timber trees'. *OW*, 27 August 1896, 25.

<sup>96</sup> Schmidt, 'From Arbor Day to the Environmental Sabbath': 303–4.

<sup>97</sup> Thomas, *Man and the Natural World*, 92–191.

<sup>98</sup> See, for instance, 'Scrapbook containing articles by William McCaw, 1855–1880', Dunedin: PCANZA, Box NZ487, Jessie Stewart 398/49/7.

<sup>99</sup> Veronika Thornburrow, *An Introduction to the History of the Royal New Zealand Society for the Prevention of Cruelty to Animals* (Auckland: Royal New Zealand Society for the Prevention of Cruelty to Animals, c.1993), 23, 64.

<sup>100</sup> At the inaugural meeting to discuss founding an SPCA in Otago, for instance, supporters included Rev. Dr. Stuart (Presbyterian), Archdeacon Edwards (Anglican), Rev. R. Waddell (Presbyterian), and Rev. A.R. Fitchett (Methodist turned Anglican) – *ODT*, 27 June 1882, page 3, columns 2–3.

<sup>101</sup> Bishop Nevill, quoted in Otago Society for the Prevention of Cruelty to Animals, *Fourteenth Annual Report of the Otago Society for the Prevention of Cruelty to Animals* (Dunedin: *ODT* and Witness Co., 1896), 13.

<sup>102</sup> Menzies, "'Natural Women'", 35–7. Quote from 37.

<sup>103</sup> *ODT*, 23 August 1876, 3; *OW*, 2 September 1876, 3.

<sup>104</sup> David Hancocks, *A Different Nature: The Paradoxical World of Zoos and their Uncertain Future* (Berkeley; Los Angeles; London: University of California Press, 2001), 19–25, here 21.

<sup>105</sup> See further, John Stenhouse, 'Imperialism, Atheism, and Race: Charles Southwell, Old Corruption, and the Maori', *Journal of British Studies* 44, 4 (2005): 754–74, doi: 10.1086/431940.

<sup>106</sup> *Otago Journal*, 5 (1848): 66.

<sup>107</sup> *TPNZI*, 1 (1868): 10. Sir George Grey articulated similar views in his presidential address to the New Zealand Society, forerunner of the New Zealand Institute: See *Address of Sir George Grey, K.C.B., to the members of the New Zealand Society, as their first president, September 26, 1851* (Wellington: Spectator Office, 1851), 6–11.

<sup>108</sup> Reverend Thomas Burns to Captain William Cargill, Portobello, 6 February 1847. MS 0076, Dunedin: HL.

<sup>109</sup> Fergus Roderick James Sinclair, “‘Waste Howling Wilderness’: Explorations in the issue of Waste Lands in Provincial Otago” (B.A. Honours diss., 1985, University of Otago), 4–19, here 7.

<sup>110</sup> With centuries of Maori resource use, of course, what many Europeans perceived as unused land was in fact highly managed. Note, for instance, Atholl Anderson, ‘A fragile plenty: Pre-European Maori and the New Zealand environment’, in *Environmental Histories of New Zealand*, 19–34. Henry Clark and Alex Garvie to Reverend Thomas Burns, George Turnbull and James Black (Church Trustees), 20 October 1848, Church Title Deeds (miscellaneous), 1848–59, reference SYNOD89/84 BV4-1, Dunedin: PCANZA.

<sup>111</sup> Grove, *Green Imperialism*, 168–308.

<sup>112</sup> *Dictionary of New Zealand Biography* (hereafter, *DNZB*), vol. 1, 547–8; Joe Young, ‘Aspects of the Thought of William Thomas Locke Travers’ (B.A. Hons. diss., Otago University, 2002).

<sup>113</sup> *Wellington Independent*, 10 August 1869, 3.

<sup>114</sup> Graeme Wynn, ‘Remapping Tutira: Contours in the Environmental History of New Zealand’, *Journal of Historical Geography* 23,4 (1997): 418–416, 418–420, doi: 10.1006/jhge.1997.0061.

<sup>115</sup> W.T.L. Travers, ‘On the Changes effected in the Natural Features of a New Country by the Introduction of Civilized Races’, Part III, *TPNZI*, 3, (1870): 327–8.

<sup>116</sup> *Wellington Independent*, 13 Sept. 1870, p. 2.

<sup>117</sup> Travers, ‘Acclimatisation in Canterbury’, *New Zealand Country Journal* 10,2 (1886): 131–6, quote 136.

<sup>118</sup> See further, Paul Star, ‘T.H. Potts and the origins of conservation in New Zealand (1850–1890)’ (M.A. diss., University of Otago, 1991), 87–103.

<sup>119</sup> James Beattie, ‘Environmental Anxiety in New Zealand, 1841–1941: Climate Change, Soil Erosion, Sand Drift, Flooding and Forest Conservation’, *Environment and History* 9,4 (2003): 379–92, doi: 10.3197/096734003129342881.

<sup>120</sup> Ferdinand von Hochstetter, *New Zealand: Its Physical Geography, Geology and Natural History with Special Reference to the Results of Government Expeditions in the Provinces of Auckland and Nelson*, translated by Edward Sauter (Stuttgart: J G Cotta, 1867), 142. See also, Gerhard Holzer, ‘Ferdinand von Hochstetter, insbesondere als Neuseelandforscher’ (Diplomarbeit in Geschichte, University of Vienna, 1984).

<sup>121</sup> Charles O’Neill, *New Zealand Parliamentary Debates* (hereafter, *NZPD*), 1873: 1545.

<sup>122</sup> J.C. Firth, ‘On Forest Culture’, *TPNZI* 7 (1874): 181.

<sup>123</sup> John McLay, ‘My Young Life in Otago’, Part One of *Reminiscences in Papers: John McLay, Otago Peninsula* (Dunedin: Settlers’ Museum, Copy 70 [original in private hands]), 22, 4. Passages punctuated and spelling corrected.

<sup>124</sup> A.E. Woodhouse, *Guthrie-Smith of Tutira* (Christchurch: Whitcombe and Tombs, 1959).

<sup>125</sup> Cronon, ‘Foreword’, in *Tutira*, nxi–xv, quotation xv.

<sup>126</sup> Owen Chadwick, *The Reformation* (Harmondsworth: Penguin, 1982), 93.

<sup>127</sup> *Tutira*, xxi.

<sup>128</sup> *Tutira*, 294.

<sup>129</sup> *Tutira*, 258, 329, 202–203, 236, 297, xxi.

<sup>130</sup> David N. Livingstone and Mark A. Noll, 'B.B. Warfield (1851–1921): A Biblical Inerrantist as Evolutionist', *Isis* 91 (2000): 238–304, doi: 10.1086/384722.

<sup>131</sup> For references to divine providence, see, xix, 202, 402. Among dozens of Scriptural and theological references, see xviii, xix, xx, xxiii, 45, 52, 65, 66, 97, 98, 126, 137, 143, 149, 151, 158, 164, 179, 202, 203, 225, 238, 257–71, 294, 295–302, 317, 349, 372, 393, 402, 409–11, 420–22.

<sup>132</sup> Cited in xxiii.

<sup>133</sup> *Tutira*, 422.

<sup>134</sup> Bernard Lightman, "'The Voices of Nature": Popularizing Victorian Science', in *Victorian Science in Context*, ed. Bernard Lightman (Chicago: University of Chicago Press, 1997), 187–211, quotation 207.

<sup>135</sup> Cronon, 'Foreword', xi.

<sup>136</sup> E.O. Wilson, *The Creation: An Appeal to Save Life on Earth* (New York: Norton, 2006); Oelschlaeger, *Caring for Creation*; Phillip Jenkins, *The Next Christendom: The Coming of Global Christianity* (New York: Oxford University Press, 2002).